Natural Sciences and Engineering Research Council of Canada

2013-14

Report on Plans and Priorities

The Honourable Christian Paradis
Minister of Industry and Minister of State for Agriculture

NSERC CRSNG Canada

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Minister's Message

In response to the continuing challenges facing the global economy, our government is determined to keep Canada strong and prosperous by creating the right conditions for businesses to invest in innovation, create jobs and grow our economy. As Minister of Industry, I am pleased that the Industry Portfolio continues to play a key role in promoting innovation, improving Canada's marketplace policies, and efficiently managing programs and services. In doing so, we are advancing Canada's international position by supporting business growth, research and development, and targeted investment.

In refreshing the science and technology strategy and its priorities, we will strengthen federal support for business innovation and continue to build Canada's knowledge-based economy.

In 2013–14, the Natural Sciences and Engineering Research Council of Canada (NSERC) will continue to support discovery research that improves the quality of life of Canadians. NSERC will help connect more Canadian companies to post-secondary research and training. NSERC will also collaborate with stakeholders to develop and strengthen research opportunities in the natural sciences and engineering fields.

In fulfilling its mandate, the Industry Portfolio will prudently manage its financial and human resources and will play its part in the government's efforts to return to fiscal balance.

This year's Report on Plans and Priorities for the Natural Sciences and Engineering Research Council of Canada articulates our approach to modernizing the Canadian marketplace, boosting innovation, and helping drive the competitiveness of Canadian businesses and communities. On behalf of the Department and Portfolio, I look forward to working with my Cabinet and parliamentary colleagues, as well as with the private sector and other levels of government, to accomplish these objectives.

Christian Paradis
Minister of Industry and Minister of State (Agriculture)

Minister of State's Message

As the Minister of State for Science and Technology, I am pleased to introduce the 2013–14 Report on Plans and Priorities for the Natural Sciences and Engineering Research Council of Canada (NSERC).

The report comes at a time when we have good reason to reflect on our many accomplishments and Canada's solid global reputation.

Late last year, the Council of Canadian Academies released its second report on the state of science and technology (S&T) in Canada. The Council found Canadian S&T to be healthy and growing and recognized for its excellence around the world.

The Secretary-General of the Organisation for Economic Co-operation and Development has praised Canada for the way it weathered the economic storms of the past several years. Our fiscal policy and our financial system are in good shape. As is the Canadian innovation system.

The government supports an advanced economy and the creation of high-quality jobs through investments in education and training, basic and applied research, and the translation of public research knowledge to the private sector. We are focused on the conditions necessary for a high performing innovation system: supportive marketplace frameworks, engaged citizens, highly skilled people and sound infrastructure.

Since 2006, we have invested $8 billion in new funding for science, technology and the growth of innovative firms. As we review and refresh our 2007 S&T strategy, we will continue to redefine the way governments, business people and the research community partner together to drive economic activity through science.

In 2013–14, NSERC will continue to engage Canada's world-class academic research community to build prosperity in Canada. In an increasingly competitive global economy, NSERC will continue to support the expansion of Canada's knowledge-based economy by investing in our scientists and engineers to enable them to push the boundaries of scientific research for the benefit of all Canadians.

At a time when innovation is increasingly dependent on collaboration, Canada is taking a leadership role by delivering programs that bring the private and public sectors together, creating a supportive climate for start-ups, and attracting and retaining world-class expertise. In 2013–14, I will continue to work with our academic partners, the private sector and Canadians to achieve the priorities laid out in this report.

Gary Goodyear
Minister of State (Science and Technology)
(Federal Economic Development Agency for Southern Ontario)

Section I: Organizational Overview

Raison d'être

The Natural Sciences and Engineering Research Council of Canada (NSERC) is a leader in making Canada a country of discoverers and innovators for all Canadians. NSERC aims to maximize the value of public investments in research and development (R&D) and to advance prosperity and quality of life in Canada.

In today's highly competitive knowledge economies, NSERC plays a key role in Canada's innovation system by:

- **offering programs that support postsecondary research** in the natural sciences and engineering on the basis of national, peer-reviewed competitions
- **supporting partnerships and innovation** that make it easier for industry to collaborate with universities and colleges and to have access to the wealth of resources Canada's first-rate academic system has to offer
- **developing the next generation of talented scientists and engineers** through its scholarships and research stipends, and
- **increasing the visibility of Canadian research.**

NSERC Quick Facts

President: Dr. Suzanne Fortier
Chair: The Honourable James Edwards
Budget: approximately **1.05** $ billion (2013-14)
Head Office: Ottawa, Ont.
Regional Offices:
- Moncton, N.B.
- Montreal, Que.
- Winnipeg, Man.
- Vancouver, B.C.
- Mississauga, Ont.

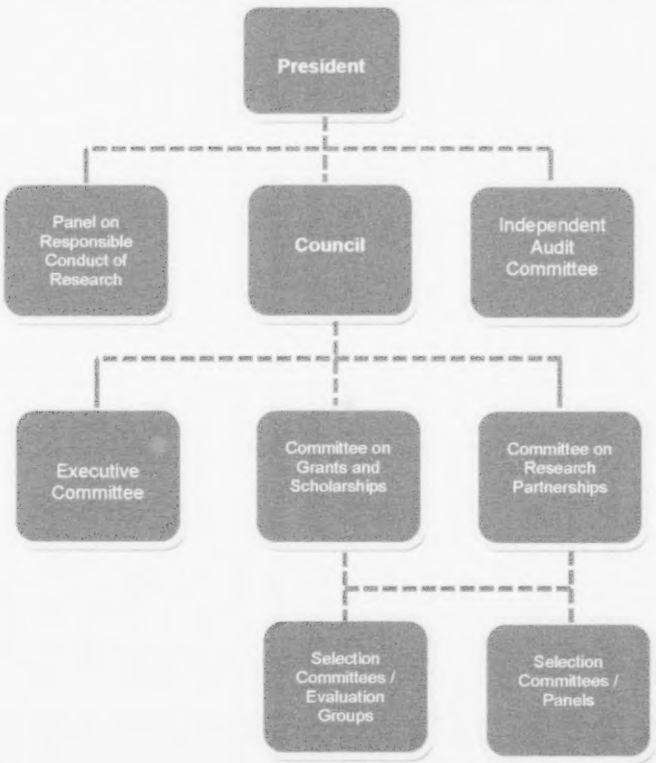
Employees: 374 Full-time Equivalents (FTEs)
Reach (2012-13):
- More than **29,000** students and postdoctoral fellows
- Over **11,000** university professors
- More than **2,400** Canadian-based companies
- Over **140** universities and colleges

Responsibilities

NSERC is a departmental corporation of the Government of Canada created in 1978. It is funded directly by Parliament and reports to it through the Minister of Industry. NSERC's Council is composed of a President and up to 18 other distinguished members selected from the private and public sectors. NSERC's President is the Chief Executive Officer. The elected Vice-President is the Chair of the Council and of its Executive Committee. NSERC's Council is advised on policy matters by various standing committees. Funding decisions are made by the President or designate on the basis of recommendations made by peer review committees. The functions of NSERC, based on the authority and responsibility assigned to it under the *Natural Sciences and Engineering Research Council Act* are to:

- promote and assist research in the natural sciences and engineering, other than the health sciences; and
- advise the Minister in respect of such matters relating to such research as the Minister may refer to the Council for its consideration.

NSERC's Governance Structure



Strategic Outcome and Program Alignment Architecture (PAA)

To achieve its mandate, NSERC works toward the following strategic outcome:

Canada is a world leader in advancing, connecting and applying new knowledge in the natural sciences and engineering.

Strategic Outcome		
1.0 Canada is a world leader in advancing, connecting and applying new knowledge in the natural sciences and engineering		
Programs		
1.1 PEOPLE Research Talent	1.2 DISCOVERY Advancement of Knowledge	1.3 INNOVATION Research Partnerships
Sub-Programs	**Sub-Programs**	**Sub-Programs**
1.1.1 Science and Engineering Promotion	1.2.1 Discovery Research	1.3.1 Research in Strategic Areas
1.1.2 Scholarships and Fellowships	1.2.2 Research Equipment and Infrastructure	1.3.2 Industry-driven Collaborative Research and Development
1.1.3 Alexander Graham Bell Canada Graduate Scholarships*		1.3.3 Networks of Centres of Excellence*
1.1.4 Vanier Canada Graduate Scholarships*		1.3.4 Training in Industry
1.1.5 Banting Postdoctoral Fellowships*		1.3.5 Commercialization of Research*
1.1.6 Canada Research Chairs*		1.3.6 College and Community Innovation*
1.1.7 Canada Excellence Research Chairs*		
The following program activity supports NSERC's strategic outcome		
1.4 Internal Services Governance and Management Support Resource Management Services Asset Management Services		

* Programs involving more than one granting agency.

Organizational Priorities

NSERC's focus on people, discovery and innovation maps directly onto the *Federal Science and Technology (S&T) Strategy* (2007) which emphasizes building a People Advantage, a Knowledge Advantage and an Entrepreneurial Advantage for Canada. All of NSERC's funding relates to these advantages. In addition, the vast majority of NSERC's expenditures are in areas that fall under the science and technology priorities established by the federal government.

Priority	Type	Strategic Outcome
People Advantage	On-going	Canada is a world leader in advancing, connecting and applying new knowledge in the natural sciences and engineering

Why is this a priority?

The *Federal Science and Technology Strategy* (2007) identified that an innovative and competitive society relies on the creativity and skills of highly trained people. Furthermore, the strategy's progress report (2009) identified a need to ensure that the next generation of Canadians has advanced skills in science and technology.

NSERC contributes to building a stronger culture of science, technology and innovation in Canada by encouraging young people to study science and engineering, providing university students and fellows support for their education and providing opportunities for students and fellows to train in a variety of research environments that help them develop professional, job-ready skills for their future careers.

Plans for meeting the priority:

- In 2013-14 and beyond, NSERC will continue to offer globally competitive scholarships and fellowships. To ensure that NSERC's scholarships remain relevant and effective, NSERC will carry out an evaluation of its scholarship programs in 2013-14.

- NSERC will enable innovation skills in new generations of students and researchers, and will support innovative programs that encourage the development of professional and entrepreneurial skills in students.

- In 2013-14 and beyond, NSERC will place greater emphasis on promoting the participation of women in science and engineering as students, professionals, and leaders.

- NSERC will work with the Social Sciences and Humanities Research Council (SSHRC) and the Canadian Institutes for Health Research (CIHR) to harmonize the administration and delivery of the Canada Graduate Scholarships program, as part of its commitment to maximize the benefits of its funding programs, to find efficiencies and to reduce the administrative burden for applicants and their institutions.

Priority	Type	Strategic Outcome
Knowledge Advantage	On-going	Canada is a world leader in advancing, connecting and applying new knowledge in the natural sciences and engineering

Why is this a priority?

To advance the knowledge advantage identified in the federal S&T strategy (2007), Canada must build upon research and engineering strengths, generate new ideas and innovations, and achieve excellence by global standards.

NSERC sustains Canada's capacity to conduct world-class research in the broad areas of natural sciences and engineering by supporting scientific excellence and seeding the creativity that leads to future innovations, and by supporting Canadian researchers so they can be global leaders and key players in international research collaborations. NSERC's Discovery Grants Program supports ongoing programs of research and recognizes the creativity and innovation that are at the heart of all research advances, whether made individually or in teams.

Plans for meeting the priority:

- NSERC will continue to support a strong and dynamic base of established and early career researchers by recognizing and supporting excellence with the *Discovery Grants Program* (DG). To ensure that the DG program is operating effectively, NSERC plans to conduct an evaluation of the program in 2013-14.
- In 2013-14, NSERC will revise the *Research Tools and Instruments* program and will communicate proposed changes to the research community.
- In 2013-14 and beyond, NSERC will contribute to ensuring that Canada's international research initiatives are appropriately focused and resourced by participating in international organizations such as the Global Research Council and supporting the participation of Canadian researchers in international research initiatives with countries such as Brazil and Japan.
- In 2013-14, NSERC will launch *Discovery Frontiers* projects on the theme of exploring big data, in collaboration with Genome Canada, CIHR, Canada Foundation for

Innovation (CFI) and SSHRC.

Priority	Type	Strategic Outcome
Entrepreneurial Advantage	On-going	Canada is a world leader in advancing, connecting and applying new knowledge in the natural sciences and engineering

Why is this a priority?

The *Federal Science and Technology Strategy Progress Report* (2009) stated that Canada's ability to gain a competitive advantage in today's economy increasingly depends on our ability to translate knowledge and ideas into commercial products that will generate wealth and improve the lives of Canadians and others around the world. This statement is supported by a recent report by the Organization for Economic Cooperation and Development (OECD)[1] which highlights the crucial importance that creating, diffusing and applying knowledge has in allowing businesses and countries to innovate and compete in a global economy. Furthermore, the *Expert Panel on the Review of Federal Support to Research and Development* (2011)[2] has also emphasized the idea that Canada's prosperity depends on an innovative economy and that businesses have an important role to play in boosting Canada's innovation.

Through its Strategy for Partnerships and Innovation, NSERC helps businesses to access, develop and share the most innovative ideas and approaches by connecting them with the research strength in Canada's colleges and universities; supporting and strengthening these collaborative research and development relationships, while providing an excellent experiential training environment for students to gain skills working with business.

Plans for meeting the priority:

- NSERC will enhance its efficiency and relevance to Canadian businesses by identifying and removing barriers, reducing complexity and streamlining access to the research partnership programs as indicated in NSERC's *Strategy for Partnerships and Innovation*[3].

[1] The OECD Innovation Strategy: Getting a Head Start on Tomorrow, OECD 2012

[2] Innovation Canada: A Call to Action, Review of Federal Support to Research and Development – Expert Panel Report, 2011

[3] The Expert Panel on the Review of Federal Support to Research and Development (2011) concluded that there is a need to achieve greater scale and efficiency in the implementation of federal programs aimed at increasing business R&D in Canada. The Panel's report recommended a more streamlined suite of programs, to reduce overhead costs, increase impact, enhance client awareness and improve the usability of business innovation programs. Streamlining access is one of the pillars of NSERC's Strategy for Partnerships and Innovation. NSERC is committed to enhancing the efficiency and relevance of its programs by removing barriers and reducing complexities to allow more businesses to access its programs.

- In 2013-14 and beyond, NSERC will increase Canadian businesses' awareness of the value of R&D partnerships with Canadian colleges and universities by adopting new approaches in marketing academic business collaborations facilitated by the *Strategy for Partnerships and Innovation.*

- Following on recommendations included in the Expert Panel Report on the *Review of Federal Support to Research and Development*, NSERC will work with the Industrial Research Assistance Program (IRAP) to develop an effective Concierge Service for business that includes the expertise within the postsecondary research community.

- As part of NSERC's *Strategy for Partnerships and Innovation*, NSERC will develop sector strategies for its strategic partnership programs which focus on Canada's national priorities, and will work with other agencies and government departments to enhance the impact of its support in key business sectors.

- In 2013-14, NSERC and SSHRC will carry out an audit of the Network Centres of Excellence.

Priority	Type	Strategic Outcome
Accountability	On-going	Canada is a world leader in advancing, connecting and applying new knowledge in the natural sciences and engineering

Why is this a priority?

NSERC is committed to meeting the federal government's Science and Technology Strategy (2007) objectives related to governance, value for money and performance reporting.

NSERC is taking a proactive stance to demonstrate its stewardship in the management of Canada's investments in natural sciences and engineering by measuring and reporting on the results and impacts of its programs, finding efficiencies, working with other departments and agencies, and promoting a culture of business excellence within the organization.

Plans for meeting the priority:

- NSERC will strengthen functional authorities and accountabilities to increase the effectiveness of its financial monitoring systems and to support results-based management.

- In 2013-14 and beyond, NSERC will continue its work on developing an *Open Access* policy for research publications.
- NSERC will build a more rigorous, systematic, consultative approach to connect with the research community, including implementing systematic, two-way communication channels.
- In 2013-14 and beyond, NSERC will implement initiatives to optimize operational effectiveness and improve client services. For example, NSERC will carry out a follow-up Information Management audit in 2013-14.
- NSERC will collaborate with SSHRC and CIHR to harmonize and improve programs, activities and policies, in order to provide the highest level of service and accountability to the research community in Canada.

Priority	Type	Strategic Outcome
Visibility	On-going	Canada is a world leader in advancing, connecting and applying new knowledge in the natural sciences and engineering

Why is this a priority?

In a time of enhanced accountability, NSERC demonstrates the value and social and economic benefits of the federal government's investments in science and technology by showcasing and promoting the accomplishments of Canadian researchers and institutions, thereby increasing their visibility in Canada and worldwide.

Plans for meeting the priority:

- NSERC will continue to increase its outreach and visibility to the Canadian public by leveraging relationships with partners from the academic and business sectors as well as key government departments, and by establishing new ways to connect with industry and key opinion leaders in Canada.

Risk Analysis

Operating Environment

While NSERC administers a significant budget, the Council's overall risk level compared to other government entities is considered low in terms of continuity of government operations and the maintenance of services to, and protection of the interests of, the Canadian public.

Operational Risks

NSERC's strategic and operational priorities are managed and monitored according to NSERC's Corporate Risk Profile, which is updated annually. The risks that were identified in the most recent Corporate Risk Profile are reflective of the current fiscal context which requires innovative approaches and new technologies to improve efficiency within organizations.

NSERC's high priority risks and mitigation strategies for 2013-14 are summarized in the table below.

Risk	Mitigation
Budget Management Risk The risk that the organization is ineffective in managing and monitoring the grants and operational budgets and in making informed/accurate resource related decisions.	Implementation of a modernized corporate resource management framework and integrated planning at NSERC mitigate against this risk.
Leveraging Information Technology Innovation The risk that the organization does not adequately leverage its investments in new technology to become more efficient and offer better services to the natural sciences and engineering community.	The Information Management and Information Technology (IMIT) Strategy that was introduced at NSERC in 2011-12 is serving to proactively lever technology to improve the efficiency of internal operations and client service. A new grants management system is being implemented.

Planning Summary

Financial Resources- Planned Spending ($ millions)

Total Budgetary (Main Estimates) 2013-14	Planned Spending 2013–14	Planned Spending 2014–15	Planned Spending 2015–16
$1,045.1	$1,049.8	$1,045.1	$1,044.4

Human Resources (Full-Time Equivalents—FTE[4])

2013–14	2014–15	2015–16
374	374	374

Planning Summary Table ($ millions)

Strategic Outcome	Program	Actual Spending 2010-11*	Actual Spending 2011-12*	Forecast Spending 2012-13	Planned Spending			Alignment to Government of Canada Outcomes[5]
					2013-14	2014-15	2015-16	
1.0: Canada is a world leader in advancing, connecting and applying new knowledge in the natural sciences and engineering	1.1 People: Research Talent	$334.5	$294.6	$300.9	$276.1	$276.1	$276.1	An innovative and knowledge based economy
	1.2 Discovery: Advancement of Knowledge	$440.1	$423.9	$409.4	$392.7	$392.4	$392.3	An innovative and knowledge based economy
	1.3 Innovation: Research Partnerships	$275.6	$342.2	$342.8	$357.2	$352.8	$352.2	An innovative and knowledge based economy
	Sub-Total	**$1,050.2**	**$1,060.7**	**$1,053.1**	**$1,026.0**	**$1,021.3**	**$1,020.6**	

Planning Summary Table for Internal Services ($ millions)

Program	Actual Spending 2010-11*	Actual Spending 2011-12*	Forecast Spending 2012-13	Planned Spending		
				2013-14	2014-15	2015-16
1.4 Internal Services	$25.8	$25.0	$26.5	$23.8	$23.8	$23.8
Sub-Total	**$25.8**	**$25.0**	**$26.5**	**$23.8**	**$23.8**	**$23.8**

[4] The calculation for Full-Time Equivalents includes students, as per Treasury Board Secretariat of Canada requirements.

[5] Information on departmental alignment to Government of Canada outcomes is available on Treasury Board of Canada Secretariat's website.

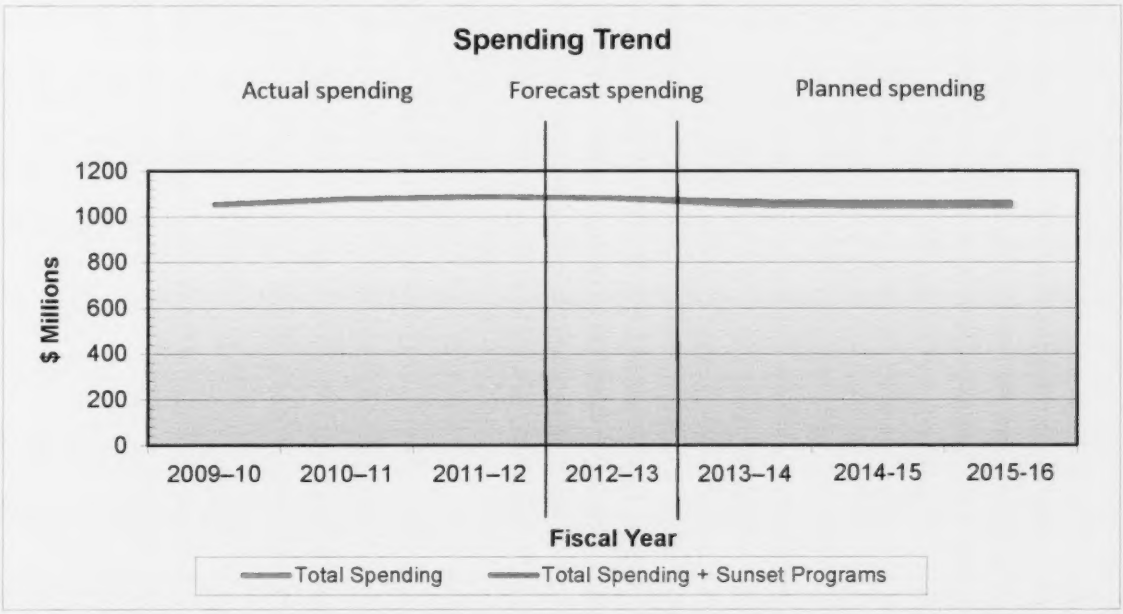
Planning Summary Total ($ millions)

Strategic Outcome, Programs and Internal Services	Actual Spending 2010-11*	Actual Spending 2011-12*	Forecast Spending 2012-13	Planned Spending		
				2013-14	2014-15	2015-16
Total	$1,076.0	$1,085.7	$1,079.6	$1,049.8	$1,045.1	$1,044.4

* The figures do not match figures included in previous reports due to changes made to the Program Alignment Architecture (PAA) in 2012-13 that are being implemented for the first time in fiscal year 2013-14. These changes involve a reorganization of programs in NSERC's new PAA structure. Variations in funding may also reflect winding down of Canada Economic Action Plan funding.

Expenditure Profile

Departmental Spending Trend[6]:



This spending trend does not include the CECR program funding since it does not follow the definition of a sunsetting program. The funding remains earmarked in the fiscal framework to be accessed on an annual basis once the peer-reviewed competition results are known.

Spending increases - From 2009-10 to 2012-13, NSERC's total budget increased as a result of the following new investments:

Budget 2009

- $35 million in 2009-10 and 2010-11, and $17.5 million in 2011-12 to temporarily expand the Canada Graduate Scholarships Program (Budget 2009);
- $2.5 million in 2009-10 and $1 million in 2010-11 for the Industrial Research and Development Internships program (Budget 2009);

[6] This spending trend does not include the CECR program funding since it does not follow the definition of a sunsetting program. The funding remains earmarked in the fiscal framework to be accessed on an annual basis once the peer-reviewed competition results are known. Investments in NSERC's total budget from the Economic Action Plan 2012 have been slightly offset by implementation of 30 million in planned savings in 2013-14, as part of the government's efforts to return to a balanced budget.

Budget 2010
- $45 million over five years to NSERC, SSHRC and CIHR to establish the Banting Postdoctoral Fellowships program, starting in 2010-11(Budget 2010);
- $13 million per year, including $8 million per year to strengthen its support for advanced research, and $5 million per year to foster closer research collaborations between academic institutions and the private sector through the Strategy for Partnerships and Innovation(Budget 2010);
- $15 million per year starting in 2010–11 to double the budget of the College and Community Innovation Program (Budget 2010);

Budget 2011
- $15 million per year to support outstanding research in the natural sciences and engineering fields, such as the Strategy for Partnerships and Innovation (Budget 2011);
- $35 million over five years to support climate change and atmospheric research at Canadian post-secondary institutions(Budget 2011);
- $3 million in 2011–12 and $5 million per year on a permanent basis starting in 2012–13 to support 30 new Industrial Research Chairs at colleges (Budget 2011);
- $12 million over five years, starting in 2011–12, to NSERC's Idea to Innovation program to support joint college-university research and development projects with promising commercialization potential(Budget 2011);
- $53.5 million over five years to support the creation of 10 new Canada Excellence Research Chairs(Budget 2011);
- $12 million over five years for a competition to select a Canada-India Research Centre of Excellence(Budget 2011);

Budget 2012
- $15 million per year to the Natural Sciences and Engineering Research Council for the Strategy for Partnerships and Innovation (Budget 2012);
- $24 million over two years and $12 million per year thereafter to make the Business-Led Networks of Centers of Excellence program permanent (Budget 2012).

Spending decreases - In 2008-09, NSERC conducted a comprehensive review of the funding, relevance and performance of all its programs. The conclusions of this Strategic Review were accepted by Treasury Board and reflected in Budget 2009.

As part of Canada's Economic Action Plan, NSERC received temporary additional funding in Budget 2009 for 2009-10, 2010-11 and 2011-12. NSERC also received additional ongoing funding in Budget 2011 and Budget 2012.

In 2012-13, the federal government announced the results of the Budget 2012 Spending Review. NSERC savings include $15 million in 2012-13, $30 million in 2013-14 and 2014-15, and $30 million ongoing thereafter.

Estimates by Vote

For information on our organizational appropriations, please see the 2012–13 Main Estimates publication.

Section II: Analysis of Program Activities by Strategic Outcome

Strategic Outcome 1.0 – Canada is a world leader in advancing, connecting and applying new knowledge in the natural sciences and engineering

Program 1.1— People: Research Talent

Program Description

This Program supports the attraction, retention and development of highly qualified people in the natural sciences and engineering in Canada through Chair programs, fellowships, scholarships and stipends. These activities are necessary to build the human capital required to enable a strong, globally competitive research and innovation system in Canada. Researchers, students and young people benefit from the grant funding which supports university research and outreach activities at universities, museums, science centres and community-based organizations.

Financial Resources ($ millions)

Total Budgetary (Main Estimates) 2013-14	Planned Spending 2013–14	Planned Spending 2014–15	Planned Spending 2015–16
$276.1	$276.1	$276.1	$276.1

Human Resources (Full-Time Equivalent—FTE)

2013–14	2014–15	2015–16
33	33	33

Expected Program Results	Performance Indicators	Targets
Canada's workforce has the required talented and skilled researchers in natural sciences and engineering.	Total researchers per thousand employed relative to G20 countries.	Maintain or exceed current G20 rating.
	Employment rate for occupations in the natural sciences and engineering vs. general population.	Unemployment rate in the natural sciences and engineering is less than the general unemployment rate (by at least 1 percentage point).

	Number of earned doctoral degrees in the natural sciences and engineering per capita vs. G20 countries.	Maintain or exceed current G20 ranking.

Planning Highlights

- **Enabling innovation skills in students and researchers**: In 2013-14, NSERC will review the selection criteria for its research partnership programs to emphasize innovation skills and will look for opportunities to expand its existing industry training programs. NSERC will communicate any updates on program requirements to the research and business communities.

- **Promoting women's participation in science and engineering:** NSERC will consider recommendations brought forward by the *Council of Canadian Academies* in a recent report (2012)[7] to recruit and retain women researchers, and will further build on the momentum of the Summit *Maximizing Opportunities: Increasing Women's Participation in Science and Engineering*.

- **Harmonization of the administration and delivery of the Canada Graduate Scholarships program:** To ensure the most efficient mechanism for delivering the Canada Graduate Scholarships program, NSERC will work with SSHRC and CIHR to harmonize the administration and delivery of the program. This initiative will streamline services across the agencies to reduce duplication of efforts and minimize the administrative burden for applicants and their institutions.

- **Evaluation of the NSERC Scholarship Programs:** In 2013-14, NSERC will conduct an evaluation of its scholarship programs. The last evaluations of the Canada Graduate Scholarships (CGS) program and the NSERC Postgraduate scholarship program were carried out in 2008. Programs of grants and contributions are evaluated every five years to review their relevance and effectiveness at meeting their objectives.

[7] Strengthening Canada's research capacity: the gender dimension, **The Expert Panel on Women in University Research**, *Council of Canadian Academies*, 2012.

Program 1.2 — Discovery: Advancement of Knowledge

Program Description

This Program supports the creation of new knowledge and maintenance of a high quality Canadian-based research capacity in the natural sciences and engineering through grants to researchers and universities. The advancement of knowledge generated by these grants is necessary to fuel a strong research and innovation system in Canada that is globally competitive. Academic researchers and universities receive funding to support the timely acceleration of research programs, the purchase or development of research equipment, or to facilitate their access to major and unique research resources.

Financial Resources ($ millions)

Total Budgetary (Main Estimates) 2013-14	Planned Spending 2013–14	Planned Spending 2014–15	Planned Spending 2015–16
$392.7	$392.7	$392.4	$392.3

Human Resources (Full-Time Equivalent—FTE)

2013–14	2014–15	2015–16
47	47	47

Expected Program Results	Performance Indicators	Targets
Researchers at Canadian universities advance knowledge in the natural sciences and engineering.	Per capita output of publications in the natural sciences and engineering vs. G20 countries.	Maintain or exceed current G20 ranking.
	Ranking in number of natural sciences and engineering publications vs. G20 countries.	Maintain or exceed current G20 ranking.
	Average Relative Citation Factor for Canadian publications in the natural sciences and engineering vs. G20 countries.	Maintain or exceed current G20 ranking.

Planning Highlights

- **Evaluation of the Discovery Grants Program:** The Discovery Grants Program assists in promoting and maintaining a diversified base of high-quality research capability in the natural sciences and engineering in Canadian universities, fostering research excellence, and providing a stimulating environment for research training. In 2013-14, NSERC will conduct an evaluation of the Discovery Grants program (DG) to ensure that the program is operating effectively. The evaluation will focus on the impact of changes introduced in 2009-10 to the peer review system and process for evaluating applications. The evaluation report is expected in late 2013-14.

- **Changes to the Research Tools and Instrument Program:** NSERC carried out consultations with the research community to define future options for the *Research Tools and Instruments* (RTI) program in 2012-13, given changes to the program's budget. In 2013-14, NSERC will implement changes to the program and communicate these changes to the research community.

- **Contributing to ensuring that Canada's international research initiatives are appropriately focused and resourced:** As part of the Global Research Council (GRC), NSERC participates in the development of a framework for increased international research cooperation intended to convey accepted international standards for science funding agencies. In 2013-14, NSERC will participate in the 2nd Global Summit Meeting of the GRC which will aim to "establish and endorse a Statement of Principles on Research Integrity and reach an agreement on an action plan for implementing Open Access to Publications as the main paradigm of scientific communication in the following years". NSERC has also established agreements for strategic research collaborations with Japan, Taiwan, France and Brazil. In 2013-14, NSERC will launch competitions under these agreements.

- **Launch of Discovery Frontiers projects on exploring big data:** In 2013-14, NSERC will launch projects for the second Discovery Frontiers (DF) competition on the theme of advancing big data in genomics research, in collaboration with Genome Canada, the Canadian Institutes of Health Research (CIHR) and the Canada Foundation for Innovation (CFI). The aim of this initiative is to address the global challenge of developing tools and methodologies to integrate currently available complex data sets being generated by the omics sciences with other data to allow for rapid access, and effective use and analysis of vast quantities of genomic information. NSERC is also participating with the Social Sciences and Humanities Research Council (SSHRC), CFI and eight other international research funders in round three of the *Digging into Data Challenge*, a grant competition designed to spur computationally-intensive research in the humanities and social sciences.

Program 1.3 — Innovation: Research Partnerships

Program Description

This Program fosters partnerships in the natural sciences and engineering and facilitates the transfer of knowledge and skills to the user sector through awards that support research projects and network activities intended for socioeconomic impact. The partnerships encouraged and enabled by these awards increase the commercialization of Canada's excellent research into new products, services and processes for the benefit of all Canadians.

Financial Resources ($ millions)

Total Budgetary (Main Estimates) 2013-14	Planned Spending 2013-14	Planned Spending 2014-15	Planned Spending 2015-16
$352.5	$357.2	$352.8	$352.2

Human Resources (Full-Time Equivalent—FTE[8])

2013-14	2014-15	2015-16
119	119	119

Expected Program Results	Performance Indicators	Targets
Canada builds more research partnerships between businesses, universities and colleges.	Growth in the number of business partners annually.	More than 5% growth.
	Evidence of knowledge/technology transfer (new and/or improved products/services, enhanced skills/knowledge of partner personnel, invention disclosures, university spin-offs, university licensing revenue, university R&D contract revenue, university patents).	Growth in the majority of indicators of knowledge/technology transfer.
	Growth in business enterprise funding of higher education research in the natural sciences and engineering.	More than 2% growth.

[8] The calculation for Full-Time Equivalent includes students, as per Treasury Board Secretariat of Canada requirements.

Planning Highlights

- **Increasing Canadian companies' awareness of the benefits of R&D collaborations with colleges and universities:** In 2013-14, NSERC will develop and pilot new approaches for marketing the advantages of partnering with universities and colleges to Canadian businesses, to increase the number of companies working with NSERC towards achieving the target of 3,000 business partners by 2014-15, as stated in its Strategy for Partnerships and Innovation. This will be achieved by continuing to broaden corporate awareness of the value of public-private R&D collaborations among Canadian businesses.

- **Removing barriers for companies and streamlining their access to NSERC programs:** In 2013-14, NSERC will continue to streamline access to its research partnership programs by identifying and removing barriers and complexity for businesses. For example, NSERC will reduce processing times and reporting burdens for the *Collaborative Research and Development* grants, and will explore new approaches to help smaller-sized companies make the leap between short-term, smaller scale projects to larger, longer-term initiatives. NSERC also plans to expand the Technology Access Centres (TACs) pilot project. TACs provide Canadian companies, in particular small and medium-sized enterprises (SMEs), access to college expertise, technology and equipment to enhance their productivity, competitiveness and innovation.

- **Developing sector strategies to support NSERC's Strategy for Partnerships and Innovation:** In 2013-14, NSERC will develop strategies to enhance the impact of funding in the areas of manufacturing, ICT, energy, environment and natural resources. As part of these strategies, NSERC will work together with partners such as the *Department of Foreign Affairs and International Trade, Natural Resources Canada* and the *International Science and Technology Partnerships Program (ISTPCanada)*, to implement joint initiatives with international partners. For example, in the manufacturing sector, NSERC's Automotive Partnership Canada (APC) initiative is expected to launch a call for proposals in 2013-14 for a joint funding opportunity to carry out collaborative research and development in clean automobile transportation. This funding opportunity is being launched in partnership with the Ministry of Science and Technology of the People's Republic of China and ISTPCanada and will focus on translation of innovations with high potential for down-stream commercialization that are expected to bring economic and social benefits to both Canada and China.

- **Working with the Industrial Research Assistance Program (IRAP) to develop an effective Concierge Service for business that includes the expertise within the postsecondary research community:** In 2013-14, NSERC will work with IRAP to assess and implement tools to link the expertise base within the NSERC systems with the new Concierge Service system being developed under the leadership of IRAP.

- **Audit of the Networks Centres of Excellence:** In 2013-14, NSERC and SSHRC are planning to conduct an internal audit of the Networks Centres of Excellence to assess the program's management controls, risk management practice and overall governance and to ensure that they are effective and adequate. An audit report is expected in 2014-15.

Program 1.4 — Internal Services

Program Activity Description

Internal Services are groups of related activities and resources that are administered to support the needs of programs and other corporate obligations of an organization. These groups are: Management and Oversight Services, Communications Services, Legal Services, Human Resources Management Services, Financial Management Services, Information Management Services, Information Technology Services, Real Property Services, Material Services, Acquisition Services, and Travel and Other Administrative Services. Internal Services include only those activities and resources that apply across an organization and not those provided specifically to a program.

Financial Resources ($ millions)

Total Budgetary (Main Estimates) 2013-14	Planned Spending 2013–14	Planned Spending 2014–15	Planned Spending 2015–16
$23.8	$23.8	$23.8	$23.8

Human Resources (Full-Time Equivalent—FTE[9])

2013–14	2014–15	2015–16
175	175	175

Expected Results	Performance Indicators	Targets
Effective management frameworks (policies, processes and controls) for all activities and resources that apply across NSERC.	Treasury Board Secretariat's Management Accountability Framework (MAF) rating for the Area of Management # 3 – Effectiveness of the Corporate Management Structure.	"Acceptable" MAF rating.
	MAF rating for the Area of Management # 12 - Effectiveness of Information Management.	"Acceptable" MAF rating.
	MAF rating for the Area of Management # 17 - Effectiveness of Financial Management and Control.	"Acceptable" MAF rating.

[9] The calculation for Full-Time Equivalent includes students, as per Treasury Board Secretariat of Canada requirements.

Planning Highlights

- **Strengthening functional authorities and accountabilities**: In 2013-14, NSERC will introduce measures to strengthen financial accountabilities that will improve its business processes and systems. Examples of such measures include checklists to enhance financial accountability, improvements to existing internal business processes, and the implementation of an on-going monitoring strategy for internal controls over financial reporting. In 2013-14, NSERC will also modernize its *Resource Management Framework* to support the effective and efficient use of organizational resources.

- **Developing an Open Access Policy:** In 2013-14 and beyond, NSERC will continue its work on developing an Open Access policy for research publications, in collaboration with SSHRC and CIHR.

- **Enhancing service delivery for operational effectiveness and improved client services:** In 2013-14, NSERC will enhance its business processes by participating in the federal government's shared financial systems and services initiative for small departments and agencies, a *SAP* enterprise software platform. NSERC will also begin to implement its new *Grants Management System*, a *Microsoft CRM software* application by gradually transitioning the application process for its programs to this new platform. These initiatives will help improve NSERC's service delivery models for both internal and external clients.

- **Continuing to increase NSERC's outreach and visibility to the Canadian public:** In 2013-14, NSERC will continue to increase its outreach and visibility to the Canadian public by fostering relationships with key partners in academic, business and government sectors. NSERC will expand its dialogue with the research community by implementing systematic two-way communications channels, such as teleconferences, webinars and surveys.

  In 2013-14 and beyond, NSERC will build a more rigorous, systematic consultative approach for connecting with the research community. For example, NSERC will communicate potential and upcoming program changes to the research community in advance to gather ideas and information.

- **Ensuring that appeal processes for applicants are effective and efficient:** NSERC strives to provide equitable treatment of applications and fair assessments in accordance with the selection criteria for its programs and existing budgetary constraints. In 2013-14, NSERC is planning a horizontal audit of appeals in collaboration with SSHRC. The audit is intended to provide assurance that the processes and practices in place for the appeal process for applicants to NSERC programs is effective and efficient. An audit report is expected in 2013-14.

- **Harmonization with SSHRC and CIHR:** In 2013-14 and beyond, NSERC will collaborate with SSHRC and CIHR to harmonize the administration and delivery of programs and continue improving programs, activities and policies in order to provide the highest level of service and accountability to the research community in Canada. NSERC will share resources and vehicles such as common websites, to engage and solicit feedback from the research community, whenever appropriate.

- **Follow-up Audit on Information Management:** In 2013-14, NSERC will carry out a follow-up audit to ensure that recommendations outlined in previous information management audits have been implemented and that any issues identified have been addressed. This follow-up audit is expected to be completed in 2013-14.

Section III: Supplementary Information

Financial Highlights

The future-oriented financial highlights presented within this Report on Plans and Priorities are intended to serve as a general overview of NSERC's financial position and operations. These financial highlights are prepared on an accrual basis to strengthen accountability and improve transparency and financial management.

Future-Oriented Condensed Statement of Operations and Departmental Net Financial Position for the year (ended March 31)

($ millions)

	$ Change	Forecast 2013-14	Estimated Results 2012-13
Total expenses	(24.8)	1,057.5	1,082.3
Total revenues	-	0	0
Net cost of operations before government funding and transfers	(24.8)	**1,057.5**	**1,082.3**
Departmental net financial position	0.2	(0.3)	(0.5)

Future-Oriented Condensed Statement of Financial Position for the year (ended March 31)

($ millions)

	$ Change	Forecast 2013-14	Estimated Results 2012-13
Total net liabilities	-	7.9	7.9
Total net financial assets	-	4.2	4.2
Departmental net debt	-	3.7	3.7
Total non-financial assets	0.2	3.4	3.2
Departmental net financial position	0.2	(0.3)	(0.5)

Future-Oriented Financial Statements

The Future-oriented financial statement can be found on NSERC's website at:
http://www.nserc-crsng.gc.ca/NSERC-CRSNG/Reports-Rapports/plans-plans_eng.asp

List of Supplementary Information Tables

All electronic supplementary information tables found in the *2013–14 Report on Plans and Priorities* can be found on NSERC's website at:
http://www.nserc-crsng.gc.ca/NSERC-CRSNG/Reports-Rapports/plans-plans_eng.asp

- Details on Transfer Payment Programs;
- Greening Government Operations;
- Upcoming Internal Audits and Evaluations over the next three fiscal years.

Tax Expenditures and Evaluations Report

The tax system can be used to achieve public policy objectives through the application of special measures such as low tax rates, exemptions, deductions, deferrals and credits. The Department of Finance publishes cost estimates and projections for these measures annually in the Tax Expenditures and Evaluations publication[10].The tax measures presented in the Tax Expenditures and Evaluations publication are the sole responsibility of the Minister of Finance.

[10] http://www.fin.gc.ca/purl/taxexp-eng.asp

Section IV: Other Items of Interest

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